DOCUMENT RESUME

ED 156 265 JC 780 360

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TITLE Information Exchange Procedures for Fiscal 1976-77 and Comparisons of IEP Data for 1974-77.
INSTITUTION Delaware County Community Coll., Media, Pa.
PUB DATE Jun 78
NOTE 26p.

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS Community Colleges; *Cost Effectiveness; Costs; Enrollment; *Expenditure Per Student; Expenditures; Institutional Research; Intellectual Disciplines; *Junior Colleges; Operating Expenses; *Program Costs; *Unit Costs; Vocational Education

ABSTRACT

As part of a continuing series of studies conducted at Delaware County Community College since 1974, this Information Exchange Procedures study presents direct and full costs per full-time equivalent (FTE) enrollment in broad instructional areas, unit costs per credit hour by discipline and by program, program full costs per student credit hour, as well as comparisons of direct costs for instructional, administrative, and support areas for 1974/75-1976/77. Study results indicated occupational programs had significantly higher direct and full costs per FTE; disciplines with the lowest average section size, such as French, Spanish, and respiratory therapy generally had higher direct costs per credit hour; and more accurate allocation of full costs produced significantly lower full costs per credit hour for fire science technology, liberal arts, and engineering and higher costs for clerical studies, nursing, and respiratory therapy. Significant increases in direct costs for occupational and general programs could have resulted from allocating student wages and capital costs, itemized separately in 1974/75 and 1975/76, to other categories in 1976/77. Total regular instruction direct cost per credit hour increased from 18.51 in 1975/76 to 22.42 in 1976/77. (Author/TE)

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DELAWARE COUNTY COMMUNITY COLLEGE

INFORMATION EXCHANGE PROCEDURES FOR FISCAL 1976-77

AND

COMPARISONS OF IEP DATA FOR 1974-77

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June 1978

OFFICE OF MANAGEMENT SYSTEMS, PLANNING AND RESEARCH

JC 780 360

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INTRODUCTION

The Information Exchange Procedures (IEP) are a set of cost-study techniques which enable a college to examine its expenditures for instructional and support services, disciplines, and curriculums in an objective manner which provides comparable information from one year to the next.

The cost information developed through IEP is intended to be used as a "management tool" for monitoring and improving efficient use of resources.

Delaware County Community College (DCCC) has conducted an IEP study for the past three years. Each year we have improved the methodology used to allocate full costs. This year's IEP study was able to allocate full costs on more of an actual usage basis.

DCCC's IEP study is an on-going effort. Research and Budget Office personnel will continue to refine the cost study process and will work with College managerial personnel to analyze and use the results of the study.

The following pages present DCCC's IEP data for the 1976-77 fiscal year as well as comparisons of the past three years' IEP data.

IEP TERMINOLOGY

Primary Cost Centers - areas that provide services directly related to the primary mission of the College.

Support Cost Centers - areas that provide supporting services of primary cost centers (e.g., Library, Business Office, Admissions/Records, etc.).

Direct Cost - Cost directly related to providing services through departments (e.g., salaries, supplies, fringe benefits, duplicating, postage, and telephone costs).

Indirect Cost - the direct cost of operating the support cost centers. In cost accounting, these costs are allocated or prorated across primary cost centers based upon actual usage parameters (e.g., square footage assigned to biology labs, number of purchase orders processed for drama). This year's study prorated the following actual usage parameters:

Capital $	# Telephones
# Purchase Orders	# Full-time Employees
# Vouchers	# part-time Employees
Square Footage	Coadjutant Salaries
Postage	# Copies
Contracted Printing	Average Class Size

Full Cost - the sum of direct cost and allocated indirect cost of support services.

Unit Cost - a computed figure showing the average cost to produce a credit hour taught.

Funding Sources - an IEP cost study includes all funds expended by the College including federal and state grants and independent operations.

HIGHLIGHTS

1. Direct and full cost per FTE support the hypothesis that occupational programs have a significantly higher cost than any other College programs (page 3).

2. This year's IEP includes separate direct and full cost figures for Continuing Education, Avocational, Volunteer, and the Police and Security Academies (page 3).

3. In general, those disciplines with the lowest average section size have the higher direct costs per credit hour (page 4).

4. Some disciplines which have a relatively low direct cost per credit hour have a high full cost per credit hour due to dedicated space, number of items purchased, etc. (e.g., drama, biology) (page 4).

5. The more accurate allocation of full cost for 1976-77 has produced some significantly lower full costs per credit hour for Fire Science Technology, Liberal Arts, and Engineering and a significantly higher full cost per credit hour for Clerical Studies, Nursing, and Respiratory Therapy (page 7).

6. The 1976-77 direct expenditures for Academic Administration and Executive Management are significantly higher due to inclusion of AIDP funded activities (pages 9, 10).

7. The direct expenditure for Public Relations is much lower for 1976-77 since the costs for Contracted Printing were allocated back to the actual users.

8. For 1976-77 Student Wages and Capital Costs were allocated back to other activity centers as part of direct cost. This may account for the significant increase in the direct cost for the occupational and general programs (pages 9, 10).

9. The total regular instruction direct cost per credit hour has increased from 18.51 in 1975-76 to 22.42 in 1976-77.

PART I

INFORMATION EXCHANGE PROCEDURES

FOR 1976-77

DIRECT AND FULL COST SUMMARY
1976-77

Activity Center	Direct Cost		Full Cost	
1.0 INSTRUCTION				
1.1 College & University Parallel	1,262,807		2,953,459	
1.2 Occupational & General	1,031,121		2,424,659	
1.3 Community Education	182,619		400,149	
SUBTOTAL		2,476,547		5,778,267
3.0 PUBLIC SERVICE				
3.2 Cultural Program	32,623		84,818	
		32,623		84,818
4.0 ACADEMIC SUPPORT				
4.1 Library	165,612			
4.31 Media Services	183,506			
4.32 Learning Center	30,010			
4.6 Academic Administration	224,683			
4.61 Educational Services Administration	88,421			
4.62 Continuing Education Administration	118,830			
4.4 Computer Support	46,955			
SUBTOTAL		858,017		
5.0 STUDENT SERVICE				
5.1 Student Personnel	52,520			
5.2 Student Activities	111,682			
5.31 Counseling	199,109			
5.32 Career Center	96,171			
5.5 Student Support	115,818		344,415	
5.6 Intercollegiate Athletics	3,548		38,107	
SUBTOTAL		578,848		382,522

6.0	INSTITUTIONAL SUPPORT		
6.1	Executive Management	444,123	
6.13	Institutional Research	49,574	
6.2	Fiscal Operations	221,863	
6.3	General Administrative Services	362,658	
6.4	Logistical Services	208,136	
6.5	Physical Plant Operations	787,171	
6.7	Public Relations	21,918	
6.8	Admissions & Records	204,129	
SUBTOTAL		2,299,572	
TOTAL		6,245,607	6,245,607

DIRECT AND FULL COST PER FTE
1976-77
FOR 1.0 SUBPROGRAMS

SUBPROGRAM	FTE	DIRECT COST/ FTE	FULL COST/ FTE
1.1 College & University Parallel	2528	499.52	1168.29
1.2 Occupational	1280	805.56	1894.26
1.31 Volunteer	155	156.83	375.76
1.32 Continuing Education	96	672.33	1701.11
Police & Security Academies	95	557.71	1230.61
1.33 Avocational	54	495.98	957.22
TOTAL College Average	4208	586.58	1368.00

UNIT COST BY DISCIPLINE
1976-77

HEGIS CODE	DISCIPLINE NAME	AVERAGE SECTION SIZE	DIRECT COST	CREDIT HOURS	DIRECT COST/ CREDIT HOUR	FULL COST/ CREDIT HOUR
0401	Biology	22.4	131,648	5,420	24.28	60.12
0502	Accounting	29.3	131,688	6,204	21.22	47.73
0506	Business	31.9	146,831	5,679	25.85	54.59
0801	Education	38.8	3,776	585	6.45	18.32
0835	Physical Education	-	2,606	136	19.16	43.32
1001	Art	23.7	42,492	1,926	22.06	85.62
1006	Music	30.0	23,256	960	24.22	68.13
1007	Drama	28.5	20,481	437	46.86	132.39
1102	French	17.4	11,441	261	43.83	87.39
1105	Spanish	18.8	20,629	450	45.84	91.68
1501	English	23.9	443,463	18,426	24.06	52.87
1509	Philosophy	33.5	19,293	1,710	11.28	27.81
1701	Mathematics	24.9	220,105	12,409	17.73	39.66
1901	Physical Science	22.0	54,171	2,602	20.81	52.18
1905	Chemistry	26.1	78,037	3,220	24.23	61.34
2001	Psychology	33.7	111,665	8,508	13.12	31.10
2204	Economics	33.4	26,188	1,704	15.36	35.41
2205	History	34.6	120,256	7,308	16.45	37.38
2207	Political Science	31.5	59,012	2,562	23.03	49.49
2208	Sociology	28.9	87,430	5,148	16.98	38.29
4903	Humanities	30.4	9,122	822	11.09	26.81
5005	Secretarial	20.2	85,962	2,210	38.89	114.69
5010	Hotel/Restaurant	20.7	28,881	865	22.28	70.64
5101	Data Processing	31.2	53,028	2,990	17.73	49.33
5208	Nursing	26.1	169,357	2,419	70.01	151.03
5215	Respiratory Therapy	7.5	17,670	258	68.48	148.09
5399	Applied Technology	18.1	71,390	1,979	36.07	97.29
5503	Early Childhood Education	30.3	26,224	1,423	18.42	41.28
5505	Administration of Justice	30.2	74,239	2,838	26.15	56.15
5507	Fire Science Technology	31.5	3,574	378	9.45	24.70
	Volunteer		24,309	3,720	6.53	15.65
	Continuing Education		131,527	4,920	26.73	58.98
	Avocational		26,783	1,298	20.63	39.82
TOTAL			2,476,547	117,775	21.02	49.06

UNIT COST BY PROGRAM
1976-77

CODE	PROGRAM NAME	CREDIT HOURS	DIRECT COST	DIRECT COST/ CREDIT HOUR	FULL COST	FULL COST/ CREDIT HOUR
000	Undecided	741	15,566	20.98	36,463	49.11
010	Business Administration	19,039	389,479	20.45	891,991	46.85
015	Liberal Arts	30,327	620,061	20.44	1,462,150	48.21
018	Engineering	2,752	60,445	21.96	147,399	53.56
024	Natural Science	7,825	165,016	21.08	393,078	50.23
125	General Education	7,156	148,095	20.69	352,191	49.21
150	Business Management	2,667	58,348	21.87	134,417	50.40
152	Clerical Studies	209	6,080	29.09	16,266	77.83
153	Data Processing	3,900	82,497	21.15	198,845	50.98
156	Administration of Justice	5,832	132,702	22.75	299,180	51.29
157	Fire Science Technology	450	6,725	14.94	16,292	36.20
159	Early Childhood Education	3,501	62,765	17.92	152,870	43.66
160	Nursing	4,069	197,930	48.64	433,895	106.63
161	Retail Management	1,691	38,771	22.92	88,108	52.10
162	Executive Secretarial	1,901	52,366	27.54	139,959	73.62
164	Respiratory Therapy	458	20,232	44.17	44,888	98.00
165	Hotel/Restaurant Management	2,309	57,992	25.11	130,301	56.43
166	Applied Technology	2,755	66,426	24.11	173,369	62.92
167	Accounting	2,800	60,132	21.47	138,326	49.40
168	Legal Secretarial	1,452	39,986	27.53	105,598	72.72
TOTAL		101,834	2,281,625	22.40	5,355,597	52.52

RANK ORDER OF DISCIPLINES
BY DIRECT COST FOR 1976-77

RANK	DISCIPLINE	DIRECT COST/CREDIT HOUR
1	Nursing	70.01
2	Respiratory Therapy	68.48
3	Drama	46.86
4	Spanish	45.84
5	French	43.83
6	Secretarial	38.89
7	Applied Technology	36.07
8	Hotel/Restaurant	33.38
9	Continuing Education	26.73
10	Administration of Justice	26.16
11	Business	25.85
12	Biology	24.28
13	Chemistry	24.23
14	Music	24.22
15	English	24.06
16	Political Science	23.03
17	Art	22.06
18	Accounting	21.22
19	Physical Science	20.81
20	Avocational	20.63
21	Physical Education	19.16
22	Early Childhood Education	18.42
23	Mathematics	17.73
23	Data Processing	17.73
24	Sociology	16.98
25	History	16.45
26	Economics	15.36
27	Psychology	13.12
28	Philosophy	11.28
29	Humanities	11.09
30	Volunteer	6.53
31	Education	6.45

PROGRAM FULL COST PER STUDENT CREDIT HOUR

74-75 RANK	PROGRAM	74-75 FULL COST	75-76 FULL COST	76-77 FULL COST
1	Administration of Justice	41.75	48.62	51.29
2	Accounting	47.46	48.62	49.40
3	Business Administration	48.39	47.38	48.21
4	Business Management	48.01	51.27	50.40
5	Fire Science Technology	48.19	53.51	36.20
6	Undecided	48.39	49.68	49.11
7	Early Childhood Education	48.62	46.73	43.66
8	Data Processing	49.09	49.47	50198
9	Retail Management	50.44	50.01	52.10
10	Liberal Arts	50.89	49.48	46.85
11	Clerical Studies	52.49	49.48	77.83
12	General Education	53.43	51.27	49.21
13	Natural Science	55.99	52.40	50.23
14	Hotel/Restaurant Management	56.33	63.14	56.43
15	Applied Technology	56.87	61.64	62.92
16	Legal Secretarial	59.37	60.73	73.62
17	Executive Secretarial	59.48	61.32	72.72
18	Engineering	61.40	52.86	53.56
19	Respiratory Therapy	89.38	82.01	98.01
20	Nursing	93.29	91.74	106.63

PART II

COMPARISONS OF I.E.P. DATA

FOR 1974 to 1977

COMPARISON OF DIRECT COSTS
BY PCS ACTIVITY CENTERS
1974-1976

Activity Center	Direct Cost 74-75		Direct Cost 75-76		Direct Cost 76-77	
1.0 INSTRUCTION						
1.1 College & University Parallel	899,132		1,182,989		1,262,807	
1.2 Occupational & General	438,370		628,248		1,031,121	
1.3 Community Education	86,829		109,933		182,619	
SUBTOTAL		1,424,331		1,921,170		2,476,547
3.0 PUBLIC SERVICE						
3.2 Cultural Program	-		-		32,623	
						32,623
4.0 ACADEMIC SUPPORT						
4.1 Library	108,526		149,266		165,612	
4.3 Instructional Media	113,723		176,174		183,506	
4.32 Learning Center	13,125				30,010	
4.4 Computing Support	-		39,803		46,955	
4.6 Academic Administration	202,594		359,062		431,934	
4.7 Course & Curriculum Development	27,953		100,515		-	
SUBTOTAL		465,921		824,821		858,017
5.0 STUDENT SERVICE						
5.1 Student Personnel	57,855		45,052		52,520	
5.2 Student Activities	30,235		133,128		111,682	
5.3 Counseling & Career Center	122,090		305,174		295,280	
5.5 Student Support Services	7,918		57,087		115,818	
5.6 Intercollegiate Athletics	19,991		25,671		3,548	
SUBTOTAL		238,089		566,115		578,848

6.0 INSTITUTIONAL SUPPORT			
6.1 Executive Management	308,453	327,838	493,697
6.2 Fiscal Operations	107,892	153,464	221,863
6.3 General Administrative Services	205,871	201,002	208,136
6.4 Logistical Services	280,117	320,548	362,658
6.5 Physical Plant Operations	552,809	661,674	787,171
6.7 Public Relations	39,284	92,390	21,918
6.8 Admissions & Records	108,042	159,028	204,129
SUBTOTAL	1,602,468	1,915,947	2,299,572
9.0 IEP SPECIAL ACCOUNTS			
9.1 Student Wages	83,283	87,895	-
9.3 Capital Cost - Building & Grounds	-	47,448	-
9.4 Capital Cost - Equipment	-	183,296	-
6.9 General Institutional	158,134	-	-
6.91 Staff Benefits	219,843	-	-
SUBTOTAL	461,260	318,642	-
TOTAL	4,192,069	5,546,695	6,245,607

UNIVERSITY OF CALIF.
LOS ANGELES

AUG 11 1978

CLEARINGHOUSE FOR
JUNIOR COLLEGES

COMPARISON OF DIRECT UNIT COSTS
FOR DCCC DISCIPLINES
1974-75, 1975-76, 1976-77

HEGIS CODE	DISCIPLINE NAME	COURSE LEVEL	DIRECT COST PER SEMESTER CREDIT HOUR 74-75	DIRECT COST PER SEMESTER CREDIT HOUR 75-76	DIRECT COST PER SEMESTER CREDIT HOUR 76-77
0502	Accounting	LD	14.13	15.07	21.22
5505	Administration of Justice	LD	11.21	16.09	26.15
0506	Business	LD	13.91	16.79	25.85
5101	Data Processing	LD	16.29	16.35	17.73
5503	Early Childhood Education	LD	17.23	17.08	18.42
2204	Economics	LD	13.53	14.31	15.36
0801	Education	LD	16.67	8.86	16.45
5507	Fire Science Technology	LD	13.68	20.32	9.46
2205	History	LD	12.08	13.98	16.45
0835	Health/Physical Education	LD	9.01	16.79	19.16
5010	Hotel/Restaurant Management	LD	24.60	35.62	33.38
2207	Political Science	LD	17.86	13.41	23.03
2001	Psychology	LD	11.64	12.50	13.12
5005	Secretarial Science	LD	31.25	30.95	38.89
2208	Sociology	LD	17.08	15.70	16.98
1001	Art	LD	19.77	21.26	22.06
1007	Drama	LD	21.84	37.53	46.86
1501	English	LD	19.71	19.06	24.06
1102	French	LD	35.89	32.42	43.83
4903	Humanities	LD	11.53	10.82	11.09
1006	Music	LD	24.15	17.16	24.22
1509	Philosophy	LD	15.77	10.82	11.28
1105	Spanish	LD	18.88	32.42	43.84
0401	Biology	LD	20.61	18.26	24.28
1905	Chemistry	LD	24.85	25.56	24.23
1701	Mathematics	LD	19.73	16.74	17.73
5208	Nursing	LD	46.92	47.88	70.01
1901	Physical Science	LD	20.79	17.55	20.81
5215	Respiratory Therapy	LD	46.18	42.46	68.48
5399	Technology	LD	14.51	28.88	36.07
	TOTAL COLLEGE AVERAGE		17.20	17.50	22.42

COMPARISON OF DIRECT UNIT COSTS
FOR DCCC PROGRAMS
1974-75, 1975-76, 1976-77

Program Name	76-77 Direct Cost	75-76 Direct Cost	74-75 Direct Cost	76-77 SCH	75-76 SCH	74-75 SCH
Undecided	20.98	17.44	16.99	784	3036	10807
Bus. Admin.	20.45	16.50	16.65	19048	15058	9751
Lib. Arts	20.44	17.36	17.82	30348	29834	23743
Engineering	21.93	18.73	22.62	2755	1986	1209
Nat. Science	21.08	18.54	20.05	7825	6302	4173
Gen. Education	20.69	18.08	19.01	7183	7751	973
Bus. Management	21.87	17.36	16.73	2733	2375	2031
Cler. Studies	29.09	20.45	18.83	209	272	112
Data Proc.	21.15	17.35	17.32	4035	3140	1568
Admin. Justice	22.75	17.01	14.30	5838	6373	4082
Fire Science	14.94	18.99	18.35	450	350	198
Early Child. Edu.	17.92	16.24	17.11	3501	3234	2223
Nursing	48.64	34.50	34.10	4069	3828	3181
Retail Mgt.	22.92	17.57	17.76	1796	1457	1042
Exec. Secretary	27.54	22.16	21.34	1910	2117	1952
Resp. Therapy	44.17	20.55	32.59	450	552	459
Hotel/Restaurant	25.11	22.90	20.14	2402	1840	1578
Applied Tech.	24.11	22.29	20.68	2773	2696	1877
Accounting	21.47	17.01	16.80	2848	2555	805
Legal Secretary	27.53	21.92	21.83	1455	1408	328
TOTAL	22.42	18.51	19.73	102383	96177	72175